Box C

Australian Financial Markets and the UK Referendum

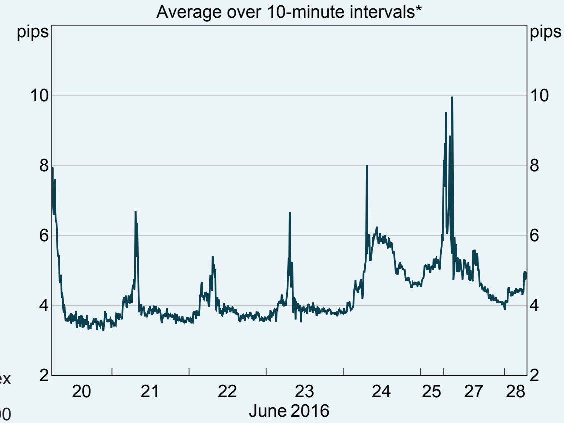
There were large movements in financial markets on 24 June as it became apparent that the UK referendum would result in a majority voting for the option to leave the European Union. In Australia, as in other countries, there were large movements in exchange rates, government bond yields and equity prices over the trading session as results from the ballot count were announced (Graph C1). Amid the increase in market volatility, there was a substantial pick-up in market turnover and the key markets where price discovery takes place functioned well and remained highly liquid.

Graph C1
Australian Government Bonds and ASX 200

Sources: Bloomberg; RBA

For a couple of days following the referendum, transaction volumes in foreign exchange markets were higher than normal. There was no material impact on price discovery, although bid-ask spreads (the difference between the best quoted prices for buying and selling) rose in currency markets for a short period of time.[1] Consistent with this, bid-ask spreads for the Australian dollar against the US dollar increased immediately after the referendum (Graph C2). However, spreads returned to their usual size over the next few days. (Spreads in early morning trades on Mondays are usually wider than those on other weekday mornings.)

Graph C2
AUD/USD Bid-ask Spreads



* Australian Eastern Standard Time (AEST)
Sources: RBA; Thomson Reuters

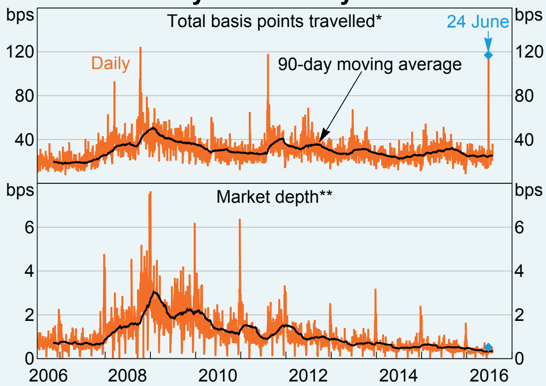
In Australia, much of the price discovery in fixed income markets occurs in the Treasury bond futures market.[2] On 24 June, the net fall in 10-year bond yields, as measured by the change in yield on the 10-year Treasury bond futures contract, was about 25 basis points. Over the course of the day, however, bond yields moved considerably in both directions. Aggregated over 5-minute intervals during each

1 Bid-ask spreads are typically measured in 'pips' in foreign currency markets. For example, the AUD/USD bid-ask spread for a bid price of 0.7510 US dollars and an ask price of 0.7511 US dollars is 1 pip.

2 For a discussion of market liquidity see Cheshire J (2016), 'Liquidity in Fixed Income Markets', RBA *Bulletin*, June, pp 49–58.

trading session (excluding after hours trading), yields moved a total of 120 basis points on the day (top panel of Graph C3). This is similar to price movements recorded during the global financial crisis in 2008 and the concerns around European sovereign debt in 2011.

Graph C3
Australian 10-year Treasury Bond Futures



* Aggregated basis point movement in bond yields over 5-minute intervals during the day session

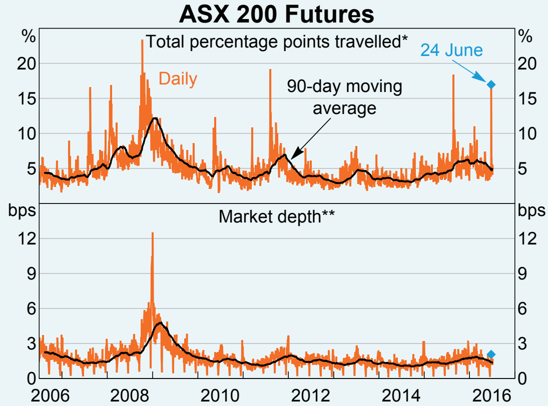
** Basis point movement per $100 million of contracts at market value

Sources: ASX; RBA; Thomson Reuters

However, in contrast to those earlier periods, liquidity in bond futures markets on 24 June did not appear to be adversely affected as it was underpinned by a substantial increase in turnover. In the Australian 3-year Treasury bond futures contract, turnover during the day session was around $31 billion, while turnover in the 10-year bond futures contract was around $23 billion. This compares with daily averages over the previous year of around $11 billion and $8 billion, respectively. Market depth, as measured by the distance yields moved per $100 million of futures contracts transacted, remained near its recent average, suggesting that transactions were able to be executed with limited price impact despite the increased volatility (bottom panel of Graph C3).

A similar pattern was evident in equity markets. On 24 June, the ASX 200 and corresponding equity futures fell by around 3 per cent during the day session. This was smaller than losses seen in other periods of heightened risk aversion, although in the futures market the intraday movements were as large as those observed in the global financial crisis and aggregated to over 15 per cent of the ASX 200's index value (top panel of Graph C4). Notwithstanding the intraday volatility, liquidity in the equity market did not appear to diminish during the trading session, as turnover rose and market depth remained near its recent average (bottom panel of Graph C4). Turnover in ASX 200 equity futures on 24 June was around $8 billion, compared with a daily average of around $4 billion over the previous year.

Graph C4
ASX 200 Futures



* Aggregated percentage point movement in ASX 200 index value over 5-minute intervals during the day session

** Basis point movement per $10 million market value of contracts

Sources: ASX; RBA; Thomson Reuters

It is more difficult to assess intraday liquidity in credit markets because almost all activity occurs over the counter (OTC), which doesn't have the same level of transparency as activity in exchange-traded markets. Credit markets are typically much less liquid than government bond markets, but they are an important source of finance for corporations. Over the day, there was a rise in spreads on corporate securities relative to government bonds and an increase in credit default swap (CDS) premia, which was consistent with moves in credit markets overseas. This occurred alongside an increase in trading activity in CDS markets. There has been little lasting impact from the event, and credit spreads and yields have subsequently declined.

Primary market bond issuance by Australian resident issuers slowed ahead of the UK referendum, but, after a brief pause, has resumed. In particular, Australian banks have issued securities in the domestic and offshore markets at similar spreads to those seen prior to the UK referendum.

The infrastructure that underpins the Australian financial market operated smoothly throughout this period. For example, the central clearing counterparties (CCPs) that are responsible for the clearing of exchange-traded products (such as bond and equity futures) and OTC derivative instruments in Australia had established plans to ensure uninterrupted operation and adequate financial cover in the event that market volatility increased around the UK referendum. In the event, the heightened market volatility and elevated turnover on 24 June prompted the CCPs to process a large volume of intraday margin calls. This included additional initial margin calls in the afternoon of the Australian trading day on 24 June, to increase collateral held to cover forward-looking volatility ahead of the European and US trading days. These calls were met on time.